

Title (en)  
APPARATUS AND METHOD FOR CONTROLLING ADAPTIVE CIRCUITS

Title (de)  
VORRICHTUNG UND VERFAHREN ZUR STEUERUNG VON ADAPTIVEN SCHALTUNGEN

Title (fr)  
APPAREIL ET PROCEDE DE CONTROLE DE CIRCUITS ADAPTATIFS

Publication  
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Application  
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Abstract (en)  
[origin: US2003034834A1] An apparatus and method for operating an adaptive circuit includes injecting a set of orthogonal tracer signals into the circuit. The tracers signals are extracted after modification by at least a portion of the circuit and are examined by respective controllers to modify operation of the circuit. In one embodiment, the invention is incorporated into a feed forward amplifier where a set of orthogonal tracer signals are injected into the amplifier. A detector controller detects the orthogonal tracer signals, as modified by portions of the amplifier, and applies each tracer signal to a respective controller. Each controller examines its respective signal and modifies its output to control a portion of the amplifier accordingly. The controllers apply their outputs to the respective portions of the amplifier at substantially the same time, leading to quick convergence of the operating point of the amplifier to an optimal or near-optimal configuration. Injection of the tracer signals into the amplifier is accomplished by dithering the controller outputs by the respective orthogonal tracer signals.

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